



## 5 Myths about Tire Flat Spots: Caring for your High Performance Car Tires

### THE PROBLEM

Don slipped into the driver's seat of his prized '96 Corvette, fresh out of storage. He shifted into gear and was just picking up speed when he felt strange vibrations—an up-and-down bumping that rattled his fillings. The wheels were balanced and the tires had less than 1,000 miles on them, so what could be causing Don's problem? Tire flat spotting.



Flatspotting happens when a tire is compressed against a hard surface while the car is parked. A section of the rubber becomes softer or stiffer than the rest of the tire. The tire flat spots cause a noticeable disturbance when the car is in motion. Flat spotted tires can cause vibrations as soon as you pull out of the garage, but sometimes are only noticeable at higher speeds when you get out on the highway.

Flat spots on tires can develop overnight, but typically occur when a car is parked for 30 days or more. Extreme temperatures, vehicle weight, tire size and tire composition all play a role in the physics of tire flat spotting.

Over the years, myths have built up around flat spotted tires, how they're created, and how to fix them. For the truth about how to prevent tire flat spots, read on.

### MYTH #1: GOOD QUALITY TIRES DON'T GET FLAT SPOTS.

Though flat spots on tires are a normal occurrence for many brands and types of tires, high-performance, high speed rated (H or higher) tires are especially prone to have this problem. High performance tires are engineered to maximize contact with the road surface in order to improve handling at high speeds. Such tires are typically softer and stiffer, with a low profile and larger tread elements.

The very qualities that make tires capable of high performance leave them vulnerable to tire flat spotting. The larger, softer surface of the tire is more likely to absorb heat, cold, moisture, and chemicals from the ground it's parked on, especially concrete floors.

Factors that increase the likelihood of a tire flat spot include:

- Low profile tires with short side-walls and a wide footprint
- Nylon-reinforced internal constructions
- Heavy loads
- Under-inflated tires
- Fluctuations in temperature
- Long periods of storage/lack of use

### MYTH #2: YOU CAN ALWAYS "DRIVE OFF" TIRE FLAT SPOTS AFTER A FEW MILES.

Almost all short term flat spots can be driven out in a short distance if you grit your teeth until the tires warm up and regain their original shape. However, driving on flat spotted tires after long term storage can be far from pleasant. And though a tire flat spot often disappears after a 25+ mile drive, many times it doesn't. Tires on vehicles stored on the ground for several months, especially in extreme temperatures, can become permanently flat spotted.

### MYTH #3: TIRE FLAT SPOTS WON'T AFFECT THE PERFORMANCE OF YOUR CAR.

In some severe cases tire flat spotting becomes permanent, effectively ruining the ride quality of a vehicle. Also, if tires are not stored properly, their appearance, performance, and compound integrity will deteriorate when not in use. Parking a car flat on the ground—especially on bare asphalt, concrete, or other heat-absorbent surfaces—can cause the tires to age and crack over time in addition to developing a flat spot on the tires.

Tires on a car in storage should be protected from sunlight, ozone, extreme temperatures, moisture, oil and grease. The longer the storage period for your vehicle, the greater exposure there is to damage and the more precautions you should take.





**MYTH #4: YOU CAN PREVENT TIRE FLAT SPOTTING WITH HOMEMADE INVENTIONS.**

Parking your car on carpet squares, sand bags, plywood, and other do-it-yourself contraptions is simply not effective to prevent tire flat spots. In order for tires to maintain their shape in long-term storage the weight of the vehicle must be lifted entirely off the tires or evenly distributed over the tires' surface.

**MYTH #5: THERE IS NO GOOD SOLUTION FOR FLAT SPOTS ON TIRES.**

Drivers like Don can take precautions that will effectively stop tire flat spotting. When storing a vehicle for any length of time, putting it up on blocks or jack stands will take the weight off the tires and prevent tire flat spots. However, jacking your car up can be inconvenient and potentially dangerous.

In the UK, Don can check his Corvette into a high end storage facility billed as a "Hotel for Fine Automobiles." The staff will rotate your tires on a special machine every 30 days to "prevent tyre flat spotting which can lead to them needing changing." Unfortunately, Don lives in Ohio. Besides, his significant other would rather he save the fancy hotels for her.

Don could also drive the car more often, but this just isn't always feasible, especially in the winter months.

Even if Don drives his car regularly, high speed rated tires are susceptible to flatspotting when a hot, malleable tire is parked on a cool concrete floor. Getting the car up off the garage floor with proper tire support after driving is essential for preventing both temporary and permanent instances of flat spotted tires.

**THE SOLUTION**

Lucky for Don, there is an easy, affordable way to prevent tire flat spotting. FlatStoppers™ tire supports are a professional-grade solution developed specifically for people like Don having trouble with tire flat spots when their vehicles are parked 30 days or more.

Installing your car on FlatStoppers™ is as simple as driving onto the low profile tire supports. FlatStoppers'™ curved shape hugs the tire and distributes the weight evenly, helping to prevent flat spots. FlatStoppers™ will not conduct heat or cold despite changing floor temperatures, protecting tires from potential damage.

Made in the USA in Escanaba, Michigan from Brute Industries, patented ultra-lightweight, 100% solid construction, FlatStoppers™ tire supports are highly durable, virtually indestructible, and support vehicles up to 6,000 lbs. They accommodate tires up to 12" wide with diameters from 25" to 30."

Don purchased FlatStoppers™ from his local Corvette dealer and was so pleased with the results he decided to write a letter:

"For 3 1/2 months my '96 Vette sat in the garage on those flatstoppers. I have been driving now about 2 weeks and it rides perfectly smooth – seems better than the short time I drove it before storage. So as I was out today on the road I said to myself I'm going to send those folks a note and let them know I think it's a great product."

–Don M. Canfield, OH